



NIROPS

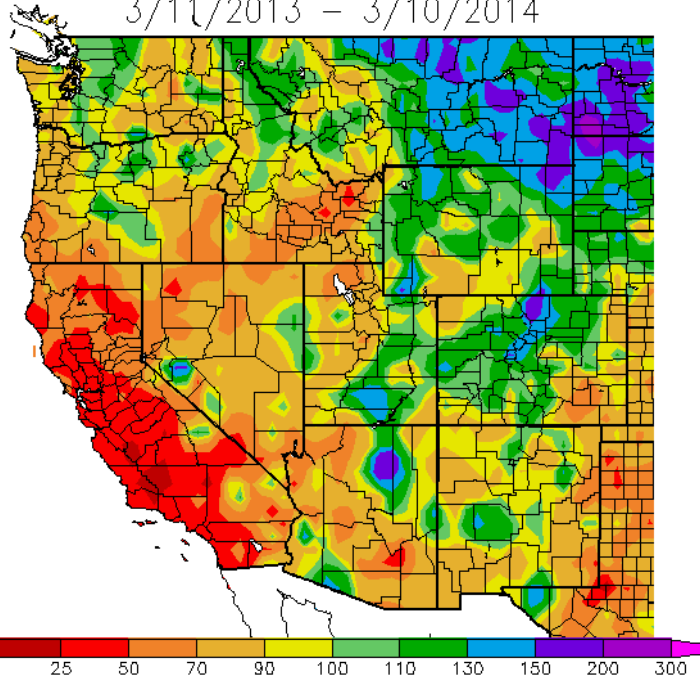
Closeout December 3, 2014
CAL FIRE Update

- **The Drought**
- **2014 Fire Season Re-Cap**
- **Notable Events**
- **Remote Sensing**

CAL FIRE 2014

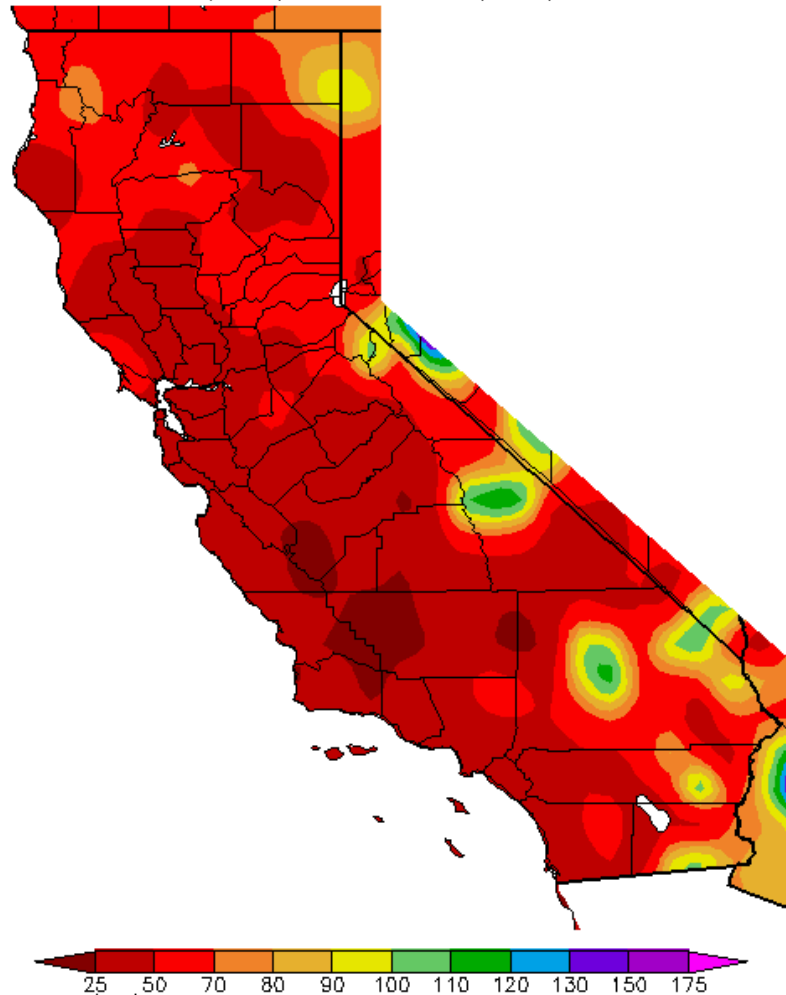


Percent of Average Precipitation (%)
3/11/2013 – 3/10/2014



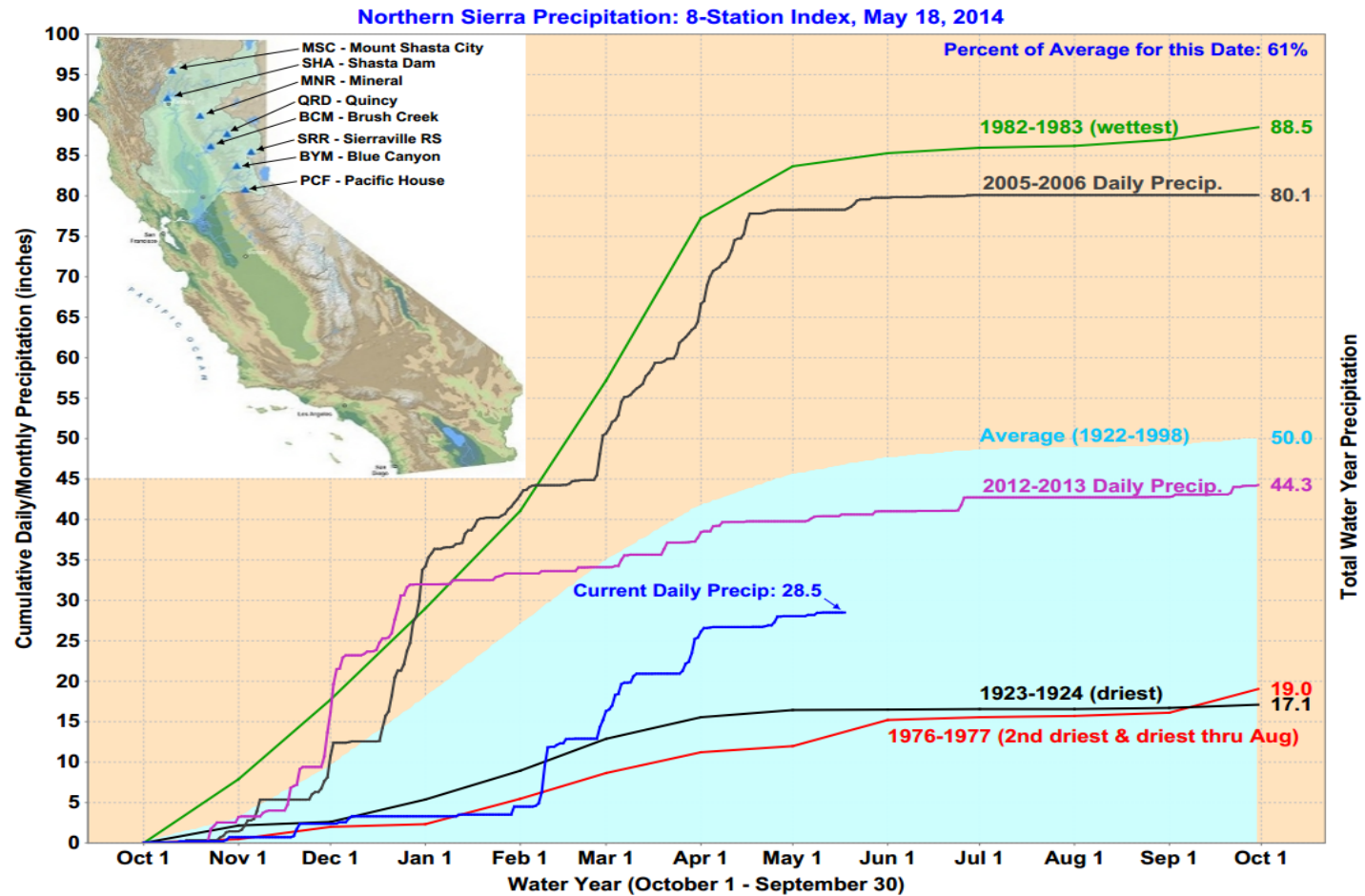
Generated 3/11/2014 at WRCC using provisional data.
NOAA Regional Climate Centers




Percent of Average Precipitation (%)
3/11/2013 – 3/10/2014



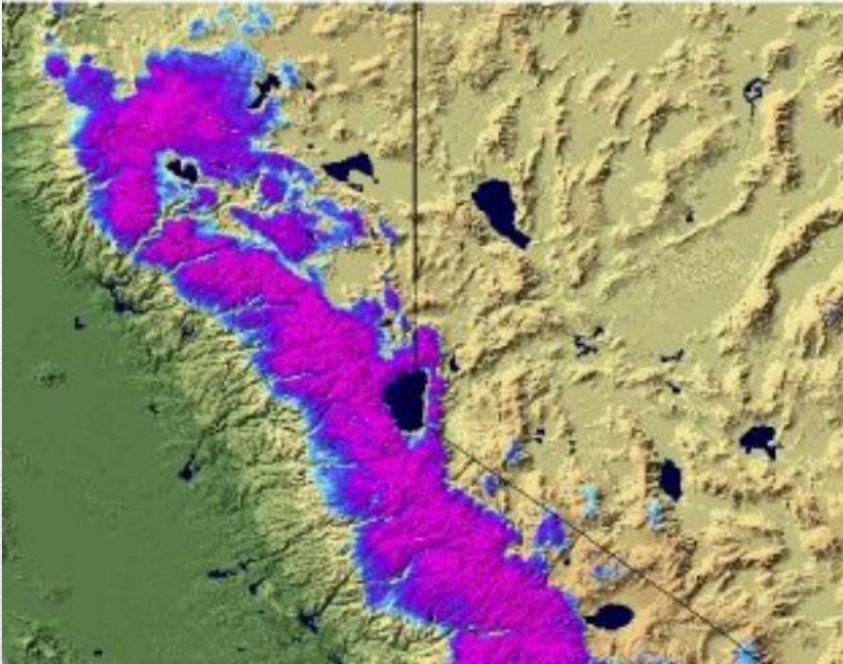
Generated 3/11/2014 at WRCC using provisional data.
NOAA Regional Climate Centers

DROUGHT

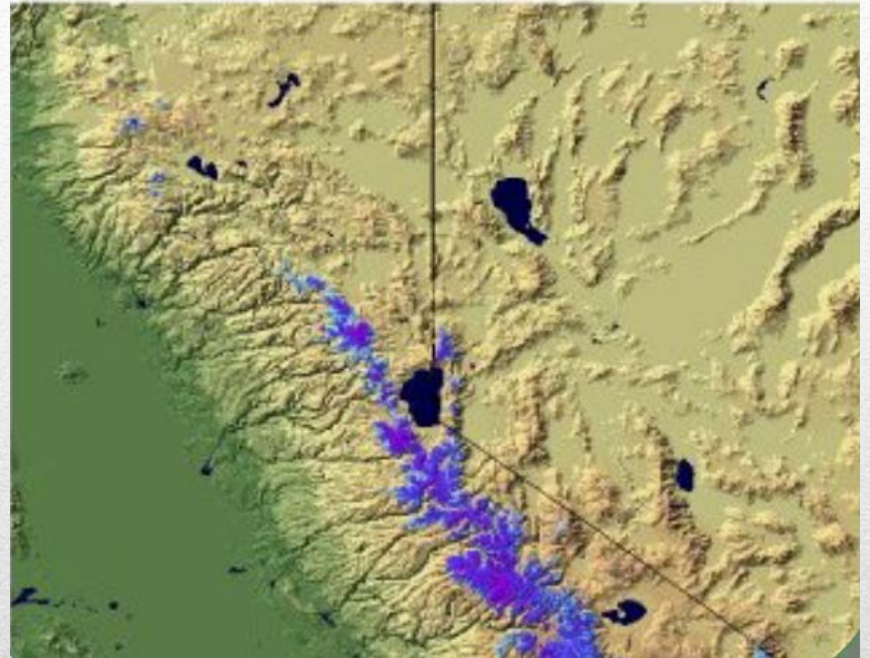


-  This year ~29" precip
-  Last year ~44" precip
-  Average (1922-1998) = 50" precip

APRIL 17, 2011



APRIL 17, 2014

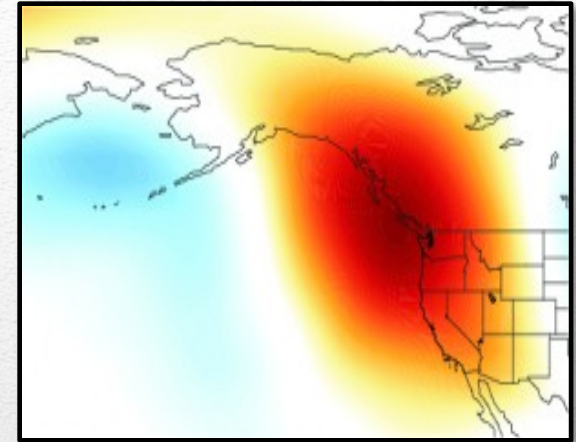


Spring Pack

- *“Ridiculously Resilient Ridge”*

<http://www.weatherwest.com/archives/tag/ridiculously-resilient-ridge>

- *Three Year Drought*
- *Early Season Predictions*
- *Extent Unprecedented*



Drought

U.S. Drought Monitor California

October 14, 2014

(Released Thursday, Oct. 16, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|------|--------|--------|--------|-------|-------|
| Current | 0.00 | 100.00 | 100.00 | 95.04 | 81.92 | 58.41 |
| Last Week <i>10/7/2014</i> | 0.00 | 100.00 | 100.00 | 95.04 | 81.92 | 58.41 |
| 3 Months Ago <i>7/15/2014</i> | 0.00 | 100.00 | 100.00 | 100.00 | 81.85 | 36.49 |
| Start of Calendar Year <i>12/31/2013</i> | 2.61 | 97.39 | 94.25 | 87.53 | 27.59 | 0.00 |
| Start of Water Year <i>9/30/2014</i> | 0.00 | 100.00 | 100.00 | 95.04 | 81.92 | 58.41 |
| One Year Ago <i>10/15/2013</i> | 2.65 | 97.35 | 95.95 | 84.12 | 11.36 | 0.00 |

Intensity:

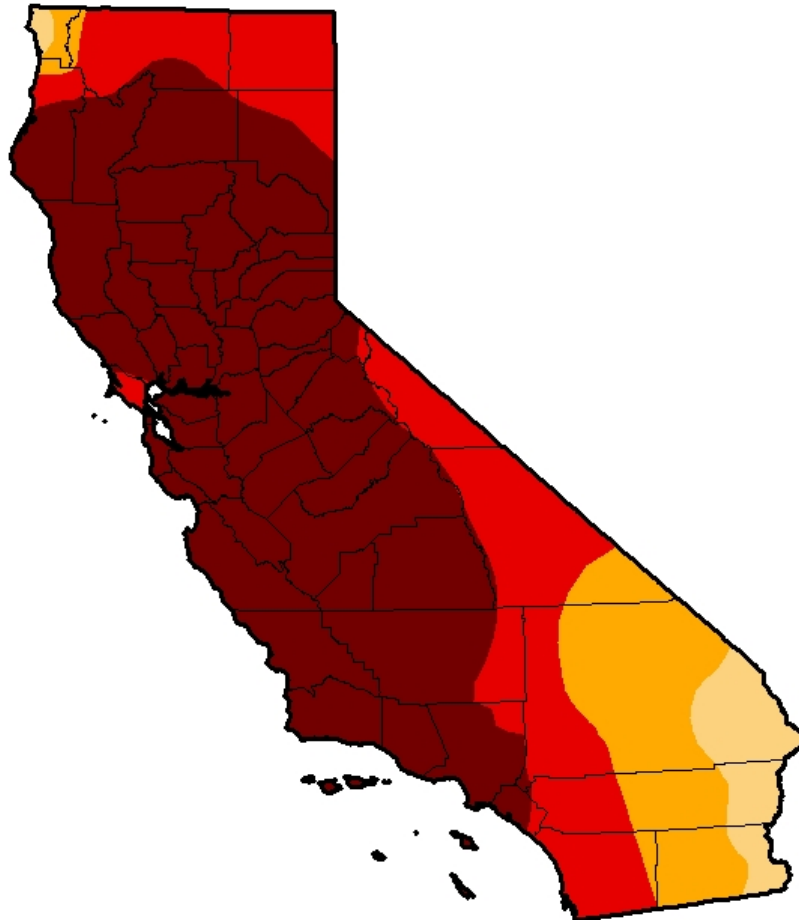
| | |
|---|--|
|  D0 Abnormally Dry |  D3 Extreme Drought |
|  D1 Moderate Drought |  D4 Exceptional Drought |
|  D2 Severe Drought | |

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Mark Svoboda

National Drought Mitigation Center



<http://droughtmonitor.unl.edu/>

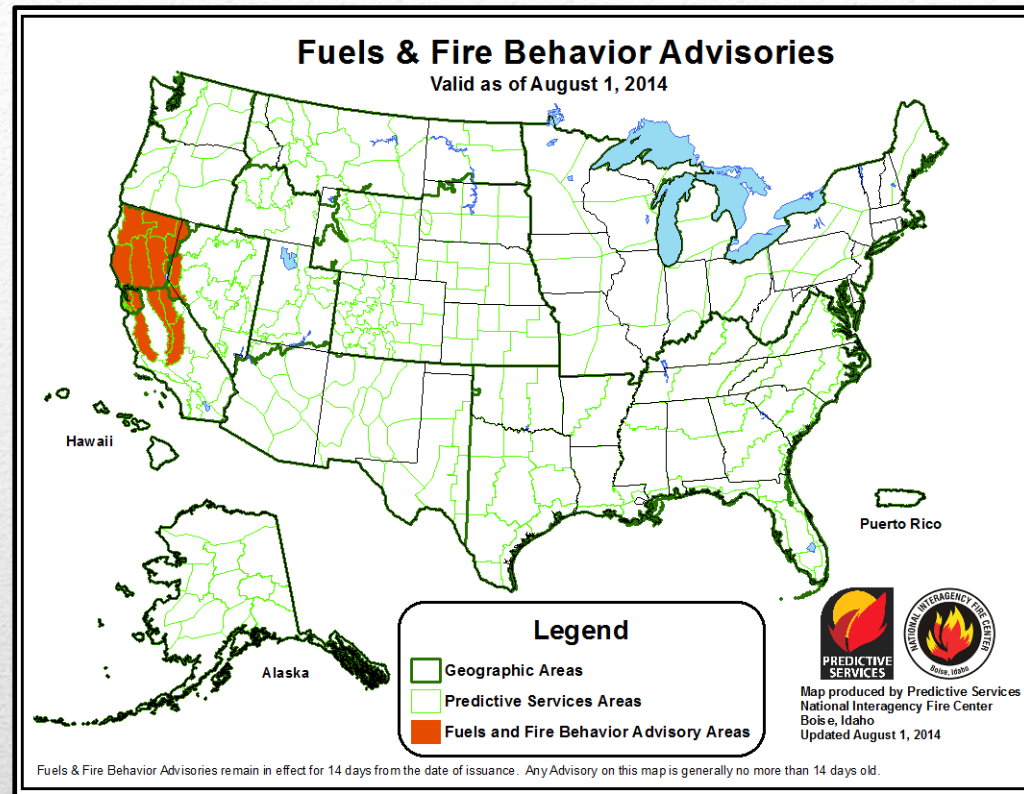


- **Predictable**
- **Live Fuels**
- **Heavy Dead Fuels – Timber**
- **Northern California**
- **Ready for the Wildcards**



Fuels Response

- Fuel Conditions throughout the state were at or near record levels of dryness.
- Fuels and Fire Behavior Advisories are used when fire behavior is above normal for a specific time of year. Advisories were posted from early July to the end of September.
- These advisories are updated every two weeks to ensure effectiveness of the advisory.



Fuel Conditions

- **Fire Season Early**
- **Fire Behavior Indicators**
- **Acres Down From Last Year**
 - 2014 – 91,000 Acres
 - 5 yr. Ave – 89,000 Acres
- **Fire Intensity**
- **Extreme Fire Behavior**



2014 Season Re-Cap

- **Northern California – Tough Terrain**
- **Lightning – Distribution/Frequency**
- **Heavy Fuels**
- **Numerous IMT Deployments**
- **Numerous Close Calls – Destroyed Equipment**



2014 Season Re-Cap



Notable Events



Equipment and Close Calls



Eiler – Bald – Day





Eiler Fire and Hat Creek

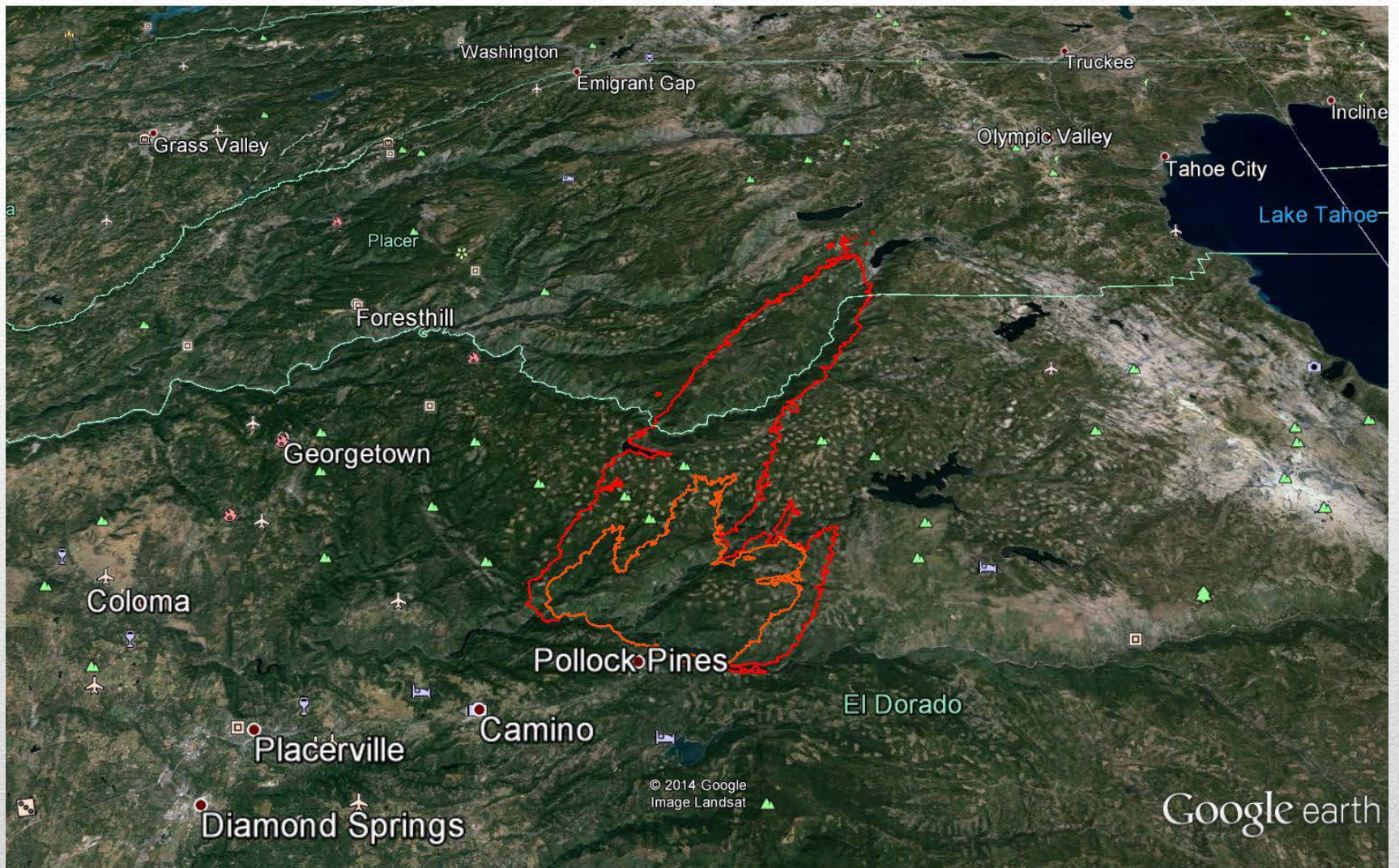


King Fire Pyrocumulus Sunset Timelapse.mov

King Fire

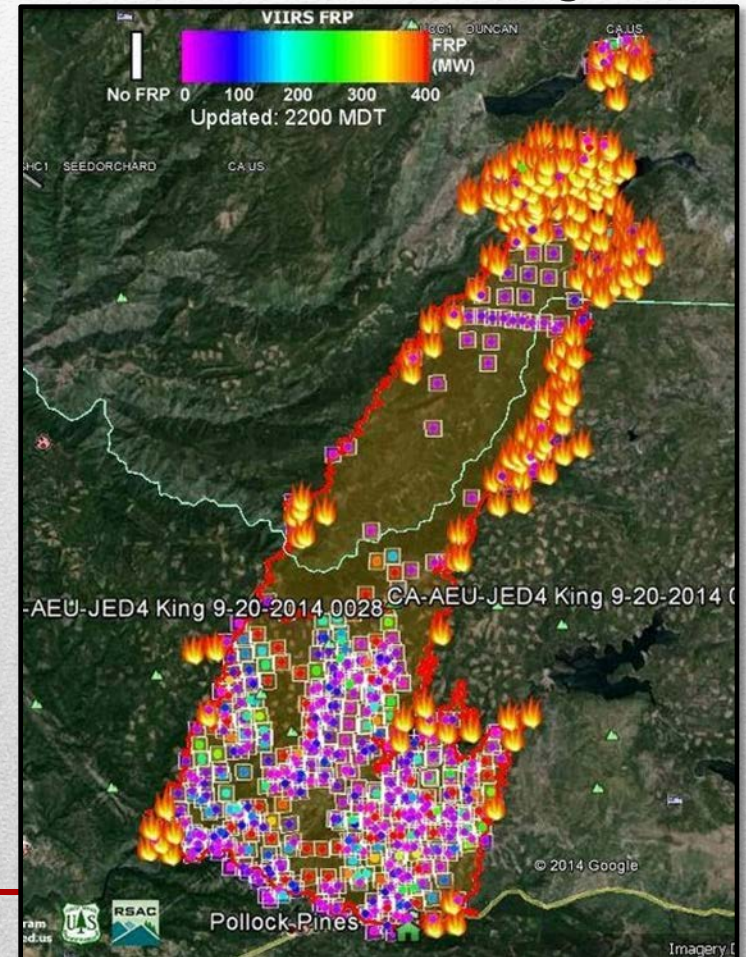


King Fire – Remote Sensing



As of October 9, 2014 California Fire Agencies used Infrared remote sensing on 55 Incidents with 348 flights

| Agency | Incidents | Flights |
|----------|-----------|---------|
| BLM | 2 | 9 |
| CAL FIRE | 22 | 70 |
| NPS | 3 | 20 |
| USFS | 28 | 249 |
| Total | 55 | 348 |



- National Guard RC-26 was used for two flights - August 13th and 14th .
- RC-26 was used for real time fire detection during a summer lightning siege.
- RC-26 can gather data from altitudes of 12,000 or more feet.
- Hotspots can be detected from a distance of 90 miles with a live video feed of 40 miles.

National Guard RC-26

- Lessons learned

- Pre-load current fire perimeter information onto aircraft computer system to help detect new fires.
- RC-26 thermal IR remote sensing technology is not able to detect heat source through cloud cover.
- On board radio is not capable of programing “narrow banded” frequencies.
- Staff with a fire agency representative to coordinate mission related activities with ground resources.

National Guard RC-26

RC Drone/Helicopter passed in front of a CAL FIRE helicopter while it was attempting a landing during a wildland fire on September 7, 2014. The helicopter was forced to make a evasive maneuver to avoid a collision.

“As I rolled out of my base turn to final at approx. 500ft AGL and 60kts, I encountered an RC Drone/Helicopter directly in front of me. I had to break hard left to avoid a collision. The RC/ Drone passed about 10 feet off my windshield..... When I first rolled out on final I thought for a split second that it was just the other helicopter in the distance because of its size and then the next second I was banking hard left. The depth perception was crazy. It was a bigger four rotor system type drone that probably would have caused some damage to our helicopter. Because we were on an IA mission I did not try and follow the unit to see where it went.”

Civilian Drone Incidents



“While flying Air Attack over the Sands incident in AEU, Camino reported to AA a drone flying over Branch I, Division 'O'. No further information was available. AA notified helicopters currently working of the hazard, of which all chose to remain working over the fire. Options of moving to another part of the fire to work or landing at the helibase were given. AA notified Camino that air operations over the fire could be shut down if the drone remained. Approximately 30 minutes later, Camino notified Sand AA that Eldorado County Sheriff located the party operating the drone and the hazard had been mitigated.”

- **500 homes, 1200 personnel:** up to 12 Air tankers and 6 or more helicopters were in the air as well as a DC-10 VLAT 911 flying at low levels along ridge tops.



Any Questions
